

Revised Technical Specifications

for

TENDER No. HARTRON/PROJ/FSL X Ray -1/2009-10

FOR

SUPPLY OF

ENERGY DISPERSIVE X RAY FLOURESCENCE

SPECTROMETER



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The technical specifications as given at pg. No.15 of section III of tender No.HARTRON/PROJ/FSL X Ray -1/2009-10 stands replaced by the following revised technical specifications:-

Revised Technical specifications

The technical specifications specified in this section are minimum suggestive Technical Specifications. The vendor will supply the below mentioned equipment that will best accommodate and meet the present and future requirements of FSL Haryana Madhuban. Bids not meeting these minimum Technical Specifications are liable to be rejected. In case the equipment quoted exceeds/differ the Tender Technical Specifications, the same should be clearly defined by the bidder.

Specifications – Energy Dispersive X-ray Fluorescence Spectrometer

X-ray Technique	Energy-dispersive X-ray spectrometer system for analysis of the various applications form of solid, powder and Liquid samples.
Elements Range	Sodium to Uranium
Standard Sample System	PPM to 100%
Sample Form	Solid, Powder and Liquid sample (Single sample loader or multi sample loader)
Maximum Generator and Tube power	10 Watt to 50 Watt
X-ray tube	End – window or Rh/Pd anode
Sample stage	8 position or more
Detector Technology	Silicon lithium/silicon drift Detector Peltier cooled state with or preferably to without liquid nitrogen.
Typical resolution of detector	<145 e V@ MnK α
Count Rate	Minimum count rates should be 100000 cps and above
Vacuum pump	Should be integrated with the EDXRF system
Operation modes	Air/vacuum for solids & Helium flushing for liquid samples (optionally)
Sample size-dia	Minimum 3mm
Sample height	Max. 150 mm
Software	Windows based software for qualitative & quantitative analysis of Forensic applications. The software should be user friendly and should have remote diagnostic facility inbuilt.
Software for standard less analysis	The EDXRF should capable to analyze standard less analysis for any type of sample.
Data Display	PC based
Printer	External coloured laser printer
Radiations protection	The EDXRF system should have been Developed and manufactured according to DIN ISO 9001/9002, CE certified, fully radiation protected system

Power supply mains	Single phase as per Indian standard/2 K.V.A. UPS
Installation & Commissioning	Installation & Commissioning at site free of cost
Training	Operation & Maintenance training at site free of cost.
Standard Samples	The bidder shall also quote optionally international standard samples set for calibration as per forensic requirement.
Samples Preparation Equipment	The bidder shall also quote optionally sample preparation equipment as per below: Semi Automatic Hydraulic press - 40 tons and required die. Mini Ball Mill (Grinder)

Note:

1. The equipment quoted must not be end sale equipment
2. Manufacturer should undertake to provide spares for minimum 7 years for the quoted model.
The bidder must provide and undertaking in this regard from the manufacturer of the equipment quoted and the same shall be enclosed with the pre-qualification cum technical bid.
3. Certified standards (Four in Nos) at least three of each element covering the whole range from Sodium to Uranium for quantitative analysis.

These revised technical specifications shall now become the integral part of the tender document no. HARTRON/PROJ/FSL X Ray -1/2009-10. Other terms & conditions remain same.